

## Proposed recommendations

Recognising that biological control of widespread established invasive species is the most cost-effective sustainable control mechanism, particularly as part of an integrated pest management (IPM) program, ISAC recommends;

1. Federal land management agencies that oversee and conduct control operations utilizing biological control agents should do so in the context of an adaptive IPM strategy by partnering with federal, state, and local scientists and agencies of relevant pest management disciplines to improve the effectiveness of biological control agents.
2. Federal land management agencies should place increased emphasis on post-release monitoring to provide feedback and input to the decision-making process and enhance the success and economic performance of biological control programs. To accomplish this, project funding must be assured for the full duration of the project, as well as the broader framework of the IPM approach.
3. Federal land management agencies should include long-term stewardship and sustainability of desired ecosystem functions as the ultimate goal of all biological control programs. To this end, IPM programs may include ecological rehabilitation that will provide resilience to the ecosystem and help prevent re-invasion or replacement of one invasive species with another. This will require coordination among many local, state and federal agencies, including those responsible for developing the biological control programs and those in charge of resource management.
4. Federal land management agencies should give increased attention during selection of biological control agents for release to: 1) characterizing natural enemy candidates using morphological taxonomy or genetic markers at the onset of a program, 2) utilizing climatic matching models to accurately determine the most likely areas of successful establishment of candidate agents, 3) understanding biological control agent host-finding behavior and attack rates, and 4) recognizing the most relevant habitat characteristics/associations of biological control agents in their place of origin to better predict rates of colonization, spread, and impact in the invaded range.